Claims 1-15 and 17-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stearns, et al. (U.S. Pat. No. 6,160,705) in view of Caletka, et al. (U.S. Patent No. 6,104,093). Applicant respectfully traverses the rejection. Claim 1 includes the feature of "an outermost insulating film protecting the exposed surface of said ground layer, said film having a plurality of openings filled with metal suitable for solder ball attachment." Stearns does not teach or suggest such a feature. For example, Stearns's layer 16 is shown uncovered in Figure 2, and covered only by a heatspreader 17 (not an insulating film) in Figure 3. Note that solder mask layer 90 is on the opposite surface of the substrate from layer 16. Claim 1 also includes the features of "said second surface having the other of said metal layers attached, portions thereof being configured as a plurality of electrical signal lines, further portions as a plurality of first electrical power lines, and further portions as a plurality of second electrical power lines, selected signal and power lines being in contact with said vias." In the Office Action, Stearns's element 22 is asserted to be the claimed signal lines, element 24 is asserted to be the claimed plurality of first electrical power lines, and element 26 is asserted to be the claimed plurality of second electrical power lines 26. However, Stearns refers to element 24 as a "ground connection", not a power line. Finally, Claim 1 includes the feature of "said signal lines being distributed relative to said first power lines such that the inductive coupling between them reaches at least a minimum value, providing high mutual inductances and minimized effective self-inductance." As mentioned above element 24, which was asserted in the Office Action to be the claimed plurality of first electrical power lines is not a power line. If Stearns's element 26 is taken to be the claimed plurality of first electrical power lines, Stearns's still fails to teach or suggest the recited feature. Applicant can find no suggestion in Stearn's that the signal lines 22 were positioned relative to element 26 in any particular orientation or for any particular reason. It was asserted in the Office Action that the claimed distributions of power lines and signal lines would have been obvious, but Applicant respectfully points out that nothing in the cited art supports

the assertion. Caletka is cited in the Office Action for its teaching of the flip-chip configuration, but Caletka does not cure the abovecited defects of Stearns. Since the combination of Stearns and Caletka fails to teach or suggest all of the elements of Claim 1, Applicant respectfully requests that the rejection be withdrawn. Claims 2-13 depend from Claim 1 and are therefore at least patentable over the references of record for the reasons presented above.

Claim 14 includes essentially the same features as cited above with regard to Claim 1. The above arguments will not be repeated here, but it should be understood that Applicant respectfully submits that Claim 14 is patentable over the references of record for at least the reasons presented above. Claims 15-22 depend from Claim 14 and are therefore patentable for at least these reasons as well.

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Stearns et al. in view of Caletka and further in view of Thomas (U.S. Patent. No. 6,228,680. As indicated above Claim 16 depends from Claim 14 and is therefore patentable for at least the reasons presented for that claim above.

New Claims 30-36 possess features which make them patentable over the references of record as well. Applicant respectfully requests that these new claims be passed to issuance.

Applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of Claims 1-22 and 30-36. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicants' attorney at the below listed telephone number and address.

Respectfully submitted,

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